

Appl. No. 09/388,265  
Amdt. dated April 30, 2004  
Amendment under 37 CFR 1.116 Expedited Procedure  
Examining Group

**PATENT**

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-7 (Canceled).

**Listing of Claims:**

- 1                   8.     (currently amended) An ohmic contact in a semiconductor device which is  
2     formed on a p-type semiconductor material, the ohmic contact including a layer of p-type  
3     semiconductor oxide and metal in a condition of mixed morphology, wherein both the p-type  
4     semiconductor oxide and the metal directly connect to the p-type semiconductor material.
- 1                   9.     (previously presented) The ohmic contact as claimed in claim 8, wherein  
2     the p-type semiconductor oxide includes a single oxide.
- 1                   10.    (previously presented) The ohmic contact as claimed in claim 8, wherein  
2     the p-type semiconductor oxide includes a mixture of various oxides.
- 1                   11.    (previously presented) The ohmic contact as claimed in claim 8, wherein  
2     the p-type semiconductor oxide includes a solid solution of various oxides.
- 1                   12.    (previously presented) The ohmic contact as claimed in claim 8, wherein  
2     the semiconductor material is p-type  $Al_xGa_yIn_zN$ , and  $0 < x, y, z < 1$ , and  $x + y + z = 1$ .
- 1                   13.    (previously presented) The ohmic contact as claimed in claim 8, wherein  
2     the p-type semiconductor oxide is one of  $NiO$ ,  $MnO$ ,  $FeO$ ,  $Fe_2O_3$ ,  $CoO$ ,  $CrO$ ,  $Cr_2O_3$ ,  $CrO_2$ ,  
3      $CuO$ ,  $Cu_2O$ ,  $SnO$ ,  $Ag_2O$ ,  $CuAlO_2$ ,  $SrCu_2O_2$  and  $PdO$ .
- 1                   14.    (previously presented) The ohmic contact as claimed in claim 8, wherein  
2     the metal is Au, Pt, Rh, Ru, or Ir.

Appl. No. 09/388,265  
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PATENT

1                   15.   (previously presented) The ohmic contact as claimed in claim 12, wherein  
2   the semiconductor material is p- type GaN.

1                   16.   (previously presented) An ohmic contact in a semiconductor device, which  
2   is formed on a p-type semiconductor material, the ohmic contact comprising a layer of p-type  
3   semiconductor oxide and a conductive layer, wherein the layer of p-type semiconductor oxide is  
4   located on the p-type semiconductor material, and the conductive layer is located on the layer of  
5   p -type semiconductor oxide.

1                   17.   (previously presented) The ohmic contact as claimed in claim 16, wherein  
2   the semiconductor material is p-type  $Al_xGa_yIn_zN$ , and  $0 \leq x, y, z \leq 1$ , and  $x+y+z = 1$ .

1                   18.   (previously presented) The ohmic contact as claimed in claim 16, wherein  
2   the p-type semiconductor oxide is one of NiO, MnO, FeO,  $Fe_2O_3$ , CoO, CrO,  $Cr_2O_3$ ,  $CrO_2$ ,  
3   CuO,  $Cu_2O$ , SnO,  $Ag_2O$ ,  $CuAlO_2$ ,  $SrCu_2O_2$ ,  $LaMnO_3$ ,  $YBa_2Cu_4O_8$  and PdO.

1                   19.   (previously presented) The ohmic contact as claimed in claim 16, wherein  
2   the layer of semiconductor oxide includes a single oxide layer.

1                   20.   (previously presented) The ohmic contact as claimed in claim 16, wherein  
2   the layer of semiconductor oxide includes a plurality of layers of oxides of the same conductivity  
3   type.

1                   21.   (previously presented) The ohmic contact as claimed in claim 16, wherein  
2   the layer of semiconductor oxide includes a mixture layer of various oxides.

1                   22.   (previously presented) The ohmic contact as claimed in claim 16, wherein  
2   the layer of semiconductor oxide includes a solid solution layer consisting of various oxides.

1                   23.   (previously presented) The ohmic contact as claimed in claim 16, wherein  
2   the conductive layer includes a single metal layer.

Appl. No. 09/388,265  
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Amendment under 37 CFR 1.116 Expedited Procedure  
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1                   24.   (previously presented) The ohmic contact as claimed in claim 16, wherein  
2   the conductive layer includes a plurality of metal layers.

1                   25.   (previously presented) The ohmic contact as claimed in claim 16, wherein  
2   the conductive layer is a transparent conductive film.

1                   26.   (previously presented) The ohmic contact as claimed in claim 17, wherein  
2   the semiconductor material is p-type GaN.

1                   27.   (previously presented) The ohmic contact as claimed in claim 25, wherein  
2   the transparent conductive film is conductive oxide, including indium-tin oxide, ZnO and ZnO  
3   doped with Ga, In, Al or Ce.